

IN THE CLAIMS

The pending claims are as follows:

1. (Previously Presented) A method for signal processing, wherein a sensor signal of an image sensor is provided as an input and wherein the input is reconstructed in a filter to establish an output for further processing, wherein the filter comprises at least one reconstruction-filter selected from the group consisting of: a luminance-reconstruction-filter, a red-green-blue-color-reconstruction-filter and a contour-reconstruction-filter, and wherein the input comprises a plurality of pixels, and a pixel provides a color value assigned to at least one of the colors red, green or blue,

characterized in that said method comprises the steps of:

applying the luminance-reconstruction-filter to an array of pixels of predetermined array size comprising a number of pixels, wherein at least one of the number of pixels is formed by a red-pixel assigned to the color of red, at least one of the number of pixels is formed by a blue-pixel assigned to the color of blue, and at least one of the number of pixels is formed by a green-pixel assigned to the color of green; and

applying, subsequent to the luminance-reconstruction-filter, the color-reconstruction filter which comprises a false-color-filter to eliminate false colors from the input.

2. (Previously Presented) The method as claimed in claim 1, characterized in that said method further comprises the step of:

weightening the red- and/or the blue-pixel by a green-parameter.

3. (Previously Presented) The method as claimed in claim 1, characterized in that said method further comprises the steps of:

summarizing the pixels of the array into one output-pixel;  
and

centering the output-pixel in the array, in particular by positioning a center-output-pixel of a second filter subsequent to a first filter in phase with the output-pixel, in particular by centering the center-output-pixel it is centered at the same center position of the array as the output-pixel.

4. (Withdrawn) The method as claimed in claim 1, characterized by applying the false-color-filter to an array of green-pixels of predetermined size, in particular to a predetermined small array of green-pixels having a size of four pixels, comprising at least two green-pixels, one red-pixel and one blue-pixel.

5. (Withdrawn) The method as claimed in claim 1, characterized in that the false-color-filter comprises the following steps:

- weightening the red- and or blue-pixels in a predetermined small array of green-pixels respectively by one ore more further green-parameters,

- applying an average filter to one or more green-pixels in the array,
- summarizing the weighted red- and blue pixels and an average of one or more of the green-pixels in the array by a median filter,
- comparing the median-filtered pixels with low-frequency-filtered pixels of the predetermined small array of green-pixels, to thereby eliminate false colors from the input.

6. (Withdrawn) The method as claimed in claim 4, characterized in that the predetermined small array of green-pixels has an array-size of 3 x 3.

7. (Withdrawn) The method as claimed in claim 1, characterized in that the applied color-reconstruction-filter has an array-size of 3 x 3 or 5 x 5, in particular an array-size of 5 x 5 in case of a heavy sensor matrix.

8. (Withdrawn) The method as claimed in claim 1, characterized by applying a post-filter subsequent to a false-color-filter to maintain a phase to a previous applied luminance-reconstruction-filter.

9. (Withdrawn) The method as claimed in claim 8, characterized by applying subsequent to a false-color-filter a post-filter of 2 x 2 array-size, to position a center-output-pixel of a predetermined

array of green-pixels in phase with a white-pixel which is centered as an output-pixel with respect to the same array as that to which a luminance-reconstruction-filter has been applied to.

10. (Withdrawn) The method as claimed in claim 1, characterized by either column-wise or row-wise processing with regard to the matrix.

11. (Previously Presented) An apparatus for signal processing, said apparatus comprising an image sensor for providing a sensor signal as an input, and a filter for reconstructing the input to establish an output for further processing, wherein the filter comprises at least one reconstruction-filter selected from the group consisting of: a luminance-reconstruction-filter, a red-green-blue-color-reconstruction-filter and a contour-reconstruction-filter, wherein

the input comprises a plurality of pixels and a pixel provides a color value assigned to at least one of the colors red, green or blue,

characterized in that the filter comprises:

a luminance-reconstruction-filter for filtering, in the input, an array of pixels of predetermined array size comprising a number of pixels, wherein at least one of the number of pixels is formed by a red-pixel assigned to the color of red, at least one of the number of pixels is formed by a blue-pixel assigned to the

color of blue, and at least one of the number of pixels is formed by a green-pixel assigned to the color of green; and

a color-reconstruction-filter coupled to an output of the luminance-reconstruction-filter, the color-reconstruction-filter comprising a false-color-filter for eliminating false colors from the input.

12. (Previously Presented) The apparatus as claimed in claim 11, wherein said apparatus further comprises:

means for weightening the red- and/or the blue-pixel by the array with a green-parameter, and/or

means for summarizing the pixels of the array into one output pixel, and/or

means for centering the output pixel in the array.

13. (Previously Presented) A computer-readable medium having stored thereon a computer program product comprising a software code section for causing a computing system to execute the method as claimed in claim 1 when the computer program product is executed on the computing system.

14. (Previously Presented) A computing system of a camera, for executing the computer program product stored on the computer-readable medium as claimed in claim 13.

15. (Previously Presented) A camera comprising an optical system and an apparatus as claimed in claim 11.